

### **REMARKS**

This is in response to the Office Action mailed on November 6, 2007, in which claims 1, 2, 4-14, 16-20, and 22-24 were rejected under 35 U.S.C. § 112, second paragraph, as being indefinite; claims 1, 2, 4-12, 14, 16-20, and 22-24 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Van den Bergen et al. (U.S. Pat. No. 6,048,113); and claim 13 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Van den Bergen et al. in view of Priebe et al. (U.S. Pat. App. Pub. 2003/0075566). With this Amendment, claims 1 and 14 are amended. Claims 1-24 are pending in the present application.

### **Claim Rejections**

#### **Claim Rejections – 35 U.S.C. § 112**

Claims 1, 2, 4-14, 16-20, and 22-24 were rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In particular, the Office Action asserted that the limitation “and to permit air in the recirculated fluid to be released from the fluid returned channel” is unclear as to whether “the air releases above the container through the bore or in the container from the channel.” Office Action, page 2. In addition, the Office Action stated that the limitation “substantially without turbulence” is unclear.

On January 30, 2008, a telephone interview was conducted between Paul G. Koziol and Examiner Craig J. Price to discuss the rejections under 35 U.S.C. § 112, second paragraph. As a result of this interview, agreement was reached on the clarity of the cited claim language, and Examiner Price agreed to withdraw the rejection of claims 1, 2, 4-14, 16-20, and 22-24 under 35 U.S.C. § 112, second paragraph.

#### **Claim Rejections – 35 U.S.C. § 103**

Claims 1, 2, 4-12, 14, 16-20, and 22-24 were rejected under 35 U.S.C. § 103(a) as being anticipated by Van den Bergen et al. With this Amendment, editorial amendments are made to

claims 1 and 14. Amended claim 1 recites a liquid dispensing and recirculating system comprising a container, a connector including a probe having a flow passage therein, and a pump coupled with the probe for pumping fluid in the container through the probe. The system also includes a fluid return channel extending longitudinally along and formed on an exterior surface of the probe adapted to return recirculated fluid to the fluid in the container substantially without turbulence and to permit air in the returned liquid to be released from the fluid return channel before reaching the fluid in the container to prevent injection of air into the fluid in the container.

Amended claim 14 recites a probe for dispensing liquid from and returning liquid to a container comprising a flow passage, a fluid return port, and a fluid return channel in fluid communication with the fluid return port via a bore, the fluid return channel extending longitudinally along and formed on an exterior surface of the probe. The fluid return channel is adapted to permit air in the returned liquid to be released from the fluid return channel before reaching the liquid in the container to prevent injection of air into the liquid in the container. The liquid is returned through the fluid return channel to the liquid in the container substantially without turbulence.

Claim 17 recites a method of dispensing and recirculating liquids comprising coupling a connector including a probe that defines a fluid passage, and a fluid return channel extending longitudinally along and formed on an exterior surface of the probe, dispensing fluid from the container through the fluid passage, and refilling fluid into the container substantially without turbulence through the fluid return channel, wherein air in the refilled fluid is released from the fluid return channel before reaching the fluid in the container to prevent injection of air into the fluid in the container.

The Office Action states that Van den Bergen et al. is silent as to the return channel extending longitudinally along and formed on the exterior surface of the probe, but asserts that it would have been obvious to switch the inlet and return lines, since it has been held that mere reversal of essential working parts of a device involves only routine skill in the art. Office Action, page 6. However, this proposed modification is not a proper one because it would render the Van den Bergen

system unsatisfactory for its intended purpose. In addition, even if the proposed modification were proper, Van den Bergen et al. do not teach or suggest all limitations of the claims.

First, obviousness can be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some suggestion or motivation to do so. *In re Kahn*, 441 F.3d 977, 986, 78 USPQ2d 1329, 1335 (Fed. Cir. 2006). However, if the proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. MPEP 2143.01(V), citing *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984).

Van den Bergen et al. disclose an outlet passage 55 that passes through body 28 to enable process liquid to be withdrawn from storage container 15, and an inlet passage 54 that passes through body 28 to enable process liquid to be returned to storage container 15. Col. 5, lines 10-13. Inlet passage 54 has a diameter of 3 mm and opens into container 15 with a cross-sectional area of 7 mm<sup>2</sup>, and outlet passage 55 has a diameter of 5 mm and opens into container 15 with a cross-sectional area of 21 mm<sup>2</sup>. Col. 5, lines 17-22. The use of an inlet passage 54 having an opening cross-section smaller than that of outlet passage 55 enables the returning liquid to be pumped into container 15 at a linear speed higher than the linear speed with which it was withdrawn from container 15. Col. 5, lines 26-30. Such a speed difference sets up turbulence within the liquid in container 15, and pumps the returning liquid into container 15 at jet velocities, adding further to the turbulence within the liquid. Col. 5, lines 30-34. This achieves the stated goal of Van den Bergen et al., which is to assure the returned liquid is mixed with the liquid in container 15 so that the liquid withdrawn from container 15 is more representative of the bulk. Col. 5, lines 34-36.

However, if the inlet and return lines of the device of Van den Bergen et al. were reversed as proposed in the Office Action, the liquid would be returned to container 15 through passage 55 having a diameter that is larger than passage 54 (which, under the proposed modification, would draw liquid from the container). As a result, the returning liquid would not be pumped into container 15 at a linear speed higher than the linear speed with which it was withdrawn from container 15, thereby preventing the liquid from being returned to container 15 at jet velocities.

Consequently, because the proposed modification of the Van den Bergen system would render it unsatisfactory for its intended purpose (i.e., returning the liquid to 15 container with turbulence to assure the returned liquid is mixed with the liquid in container 15), the proposed modification is not a proper one.

Second, even if the proposed modification were a proper one, Van den Bergen et al. do not disclose all of the limitations of independent claims 1, 14, and 17. To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981 (CCPA 1974). As described above, inlet passage 54 has an opening cross-section smaller than that of outlet passage 55, which enables the returning liquid to be pumped into container 15 at a linear speed higher than the linear speed with which it was withdrawn from container 15. Col. 5, lines 26-30. Such a speed difference sets up turbulence within the liquid in container 15, and pumps the returning liquid into container 15 at jet velocities, adding further to the turbulence within the liquid. Col. 5, lines 30-34. However, the turbulent return of fluid to container 15 induces the formation of air bubbles in the liquid. While the introduction of air bubbles may be inconsequential to the photographic sheet liquid in container 15 of Van den Bergen et al., many other fluids are rendered defective or unusable by the presence of air bubbles. See, e.g., page 2, lines 8-9 of the present application. Thus, Van den Bergen et al. do not teach that inlet passage 54 refills fluid to storage container 15 "substantially without turbulence" as required by claims 1, 14, and 17.

Therefore, because there is no suggestion or motivation to make the proposed modification to Van den Bergen, and because all the limitations of claims 1, 14, and 17 are not taught or suggested by Van den Bergen et al., the rejection of claims 1, 14, and 17 under 35 U.S.C. § 103(a) should be withdrawn. Claims 2, 4-12, 16, 18-20, and 22-24 were also rejected under 35 U.S.C. §103(a) as being unpatentable over Van den Bergen et al., and claim 13 was rejected under 35 U.S.C. §103(a) as being unpatentable over Van den Bergen et al. in view of Priebe et al. Claims 2 and 4-13 depend from claim 1, claim 16 depends from claim 14, and claims 18-20 and 22-24 depend from claim 17. As such, these claims are allowable with their respective independent base claims. In addition, it is respectfully submitted that the combination of features recited in claim 2, 4-13, 16, 18-

20, and 22-24 is patentable on its own merits, although this does not need to be specifically addressed herein since any claim depending from a patentable independent claim is also patentable. See MPEP 2143.03, citing *In re Fine*, 837 F.2d 1071 (Fed. Cir. 1988).

#### **Withdrawn Claims**

Claims 3, 15, and 21 were previously withdrawn from consideration as being drawn to a non-elected species. Claim 3 depends from allowable independent claim 1, claim 15 depends from allowable claim 14, and claim 21 depends from allowable claim 17. Thus, claim 3, 15, and 21 should also be considered and allowed, since they depend from an allowable generic independent claim. See MPEP 809.02 and 37 C.F.R. 1.146.

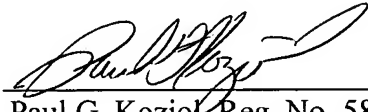
**CONCLUSION**

In view of the foregoing, it is believed that all claims in the present application are in condition for allowance. Reconsideration and allowance of claims 1, 2, 4-14, 16-20, and 22-24 are respectfully requested. In addition, claims 3, 15, and 21 should also be considered and allowed, since they depend from allowable generic independent claims 1, 14, and 17, respectively. A Notice of Allowance with respect to all claims 1-24 is respectfully requested.

Respectfully submitted,

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